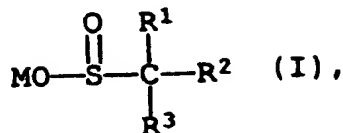


We claim:

1. A sulfinic acid compound of the formula (I)



where

M is a hydrogen atom, an ammonium ion, a monovalent metal ion or an equivalent of a divalent metal ion of the groups Ia, IIa, IIb, IVa or VIIb of the Periodic Table of the Elements;

R¹ is OH or NR⁴R⁵, where R⁴ and R⁵ independently of one another are H or C₁-C₆-alkyl;

R² is H or an alkyl, alkenyl, cycloalkyl or aryl group, it being possible for these groups to have 1, 2 or 3 substituents which are chosen independently of one another from C₁-C₆-alkyl, OH, O-C₁-C₆-alkyl, halogen and CF₃; and

R³ is COOM, SO₃M, COR⁴, CONR⁴R⁵ or COOR⁴, where M, R⁴ and R⁵ are as defined above, or, if R² is aryl, which may be unsubstituted or substituted as defined above, is also H,

and the salt thereof.

2. A sulfinic acid compound as claimed in claim 1 of the formula (I),

where

M is an ammonium or alkali metal ion or an equivalent of an alkaline earth metal ion or zinc ion.

3. A sulfinic acid compound as claimed in claim 1 or 2 of the formula (I),

where

R^1 is OH or NH_2 .

4. A sulfinic acid compound as claimed in claim 1 of the formula (I),

where

R^2 is a hydrogen atom or an alkyl or aryl group which may have one or two hydroxyl or alkoxy substituents.

5. A sulfinic acid compound as claimed in claim 1 of the formula (I),

where

R^3 is COOM or COOR⁴, where M and R⁴ are as defined in claim 1.

6. A sulfinic acid compound as claimed in claim 1 of the formula (I),

where

M is an alkali metal ion or an equivalent of an alkaline earth metal ion or zinc ion;

R^1 is OH or NH_2 ;

R^2 is H or alkyl; and

R^3 is COOM or COOR⁴, M being as defined above and R⁴ being H or C₁-C₆-alkyl.

7. A sulfinic acid compound as claimed in claim 4 of the formula (I),

where

R^2 is aryl, which may have one or two hydroxyl or alkoxy substituents; and

R^3 is H.

8. A sulfinic acid compound as claimed in claim 7 of the formula (I),

where

R^2 is hydroxyphenyl or C_1-C_4 -alkoxyphenyl.

9. A sulfinic acid compound as claimed in claim 1 of the formula (I),

where

M is an alkali metal ion or an equivalent of an alkaline earth metal ion or zinc ion;

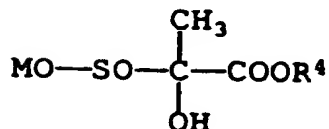
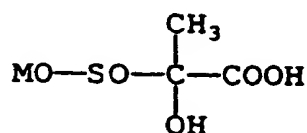
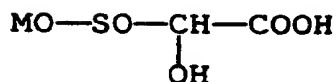
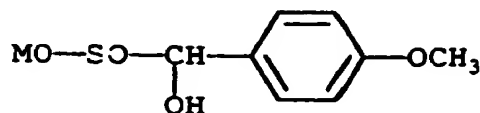
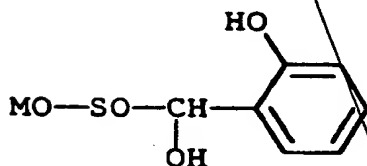
R^1 is OH or NH_2 ;

R^2 is hydroxyphenyl or C_1-C_4 -alkoxyphenyl; and

R^3 is a hydrogen atom.

10

10. Compounds of the formulae (M = Na, K, Mg, Ca, Zn):



(R^4 = CH_3 , C_2H_5).

15

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11. A mixture of a sulfinic acid compound as claimed in one of claims 1 to 10 with the sulfonic acid corresponding to the sulfinic acid compound or the salt thereof and with or without the corresponding sulfite.

12. A mixture as claimed in claim 11 having the following composition:

5 Compound of the formula (I) 20-99% by weight
Sulfonic acid corresponding to
the compound of formula (I) 0-60% by weight
M₂SO₃ 0-40% by weight

10 13. A mixture as claimed in claim 12 having the following composition:

15 2-Hydroxyphenylhydroxymethylsulfonic
acid, sodium salt: 61-98% by weight
2-Hydroxyphenylhydroxymethylsulfonic
acid, sodium salt: 2-15% by weight
Sodium sulfite: 0-37% by weight

20 14. A mixture as claimed in claim 12 having the following composition:

25 4-Methoxyphenylhydroxymethylsulfonic
acid, sodium salt: 60-98% by weight
4-Methoxyphenylhydroxymethylsulfonic
acid, sodium salt: 2-15% by weight
Sodium sulfite: 0-38% by weight

30 15. A mixture as claimed in claim 12 having the following composition:

35 2-Hydroxy-2-sulfinatoacetic acid,
disodium salt: 40-73% by weight
2-Hydroxy-2-sulfonatoacetic acid,
disodium salt: 2-7% by weight
Sodium sulfite 0-33% by weight

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Water: 5-30% by weight

16. A mixture as claimed in claim 12 having the following composition:

5

2-Hydroxy-2-sulfinatoacetic acid,
zinc salt: 20-70% by weight

2-Hydroxy-2-sulfonatoacetic acid,
zinc salt: 5-60% by weight

10

water: 5-30% by weight

17. A mixture as claimed in claim 12 having the following composition:

15

2-Hydroxy-2-sulfinatopropionic acid,
disodium salt: 38-70% by weight

2-Hydroxy-2-sulfonatopropionic acid,
disodium salt: 5-30% by weight

Sodium sulfite: 0-33% by weight

20

Water: 5-30% by weight

18. A mixture as claimed in claim 12 having the following composition:

25

Ethyl 2-hydroxy-2-sulfinatopropionate,
sodium salt: 60-80% by weight

Ethyl 2-hydroxy-2-sulfonatopropionate,
sodium salt: 0-5% by weight

Sodium sulfite: 0-5% by weight

30

Water: 5-20% by weight.

19. A composition comprising at least one sulfinic acid compound as claimed in one of claims 1-10 or at least one mixture as claimed in one of claims 11-18, together with customary additives and auxiliaries.

35

20. The use of the sulfinic acid compound as claimed in one of claims 1-10 as reducing agent.
- 5 21. The use as claimed in claim 20 as cocatalyst in emulsion polymerization or redox catalyst system in plastics production.
- 10 22. The use as claimed in claim 20 as reducing agent component for textile printing, in textile bleaching or vat dyeing or as reducing bleach for mineral refining or fiber finishing.